(19) World Intellectual Property Organization International Bureau



(43) International Publication Date 30 March 2006 (30.03.2006)

(10) International Publication Number WO 2006/033285 A1

- (51) International Patent Classification: HOIL 51/50 (2006.01)
- (21) International Application Number:

PCT/JP2005/017076

(22) International Filing Date:

9 September 2005 (09.09.2005)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

2004-278259

24 September 2004 (24.09.2004)

- (71) Applicant (for all designated States except US): SEMI-CONDUCTOR ENERGY LABORATORY CO., LTD. [JP/JP]; 398, Hase, Atsugi-shi, Kanagawa 2430036 (JP).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): KUMAKI, Daisuke. SEO, Satoshi [JP/JP]; c/o SEMICONDUCTOR ENERGY LABORATORY CO., LTD., 398, Hase, Atsugi-shi, Kanagawa 2430036 (JP).

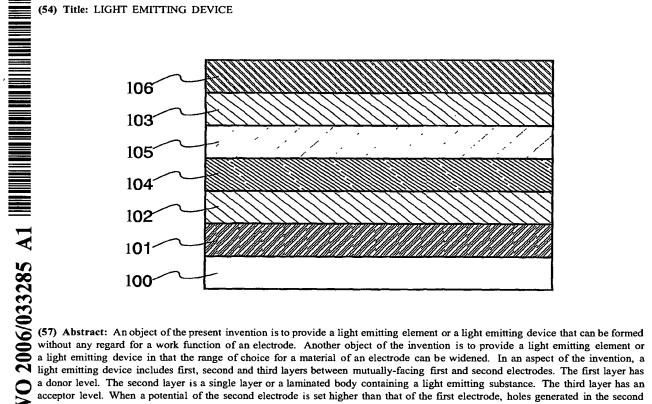
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: LIGHT EMITTING DEVICE



a donor level. The second layer is a single layer or a laminated body containing a light emitting substance. The third layer has an acceptor level. When a potential of the second electrode is set higher than that of the first electrode, holes generated in the second layer are injected in the third layer.

